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Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C. Forest Resource Economics and Policy Research Strategic Directions for the Future. Edited by Paul V Ellefson Boulder CO Westview Press, 1989, 403 pages, \$59

## **Reviewed by Jeffrey C. Stier**

Forest economists have not yet reached the stage of diminishing returns in identifying topics for further research At least that is the impression one gets from the more than 100 "strategic directions" and more than 300 individual research topics identified by the volume's 31 authors in this, the fourth such review of the field over the past 50 years and the third since 1953 The editor makes no attempt to attach priorities to the individual research areas identified, and the 20 research directions that are listed in the concluding chapter are broadly defined Consequently, the book presents a large and varied research menu rather than a set of "strategic directions" for future research Readers will have to decide for themselves the relative importance of the individual topics, but perhaps that is as it should be

Since the beginning of this century, the United States has gone from a Nation in which the forest industry exploited a mature timber resource, and for which the main determinants of timber supply were the costs of harvesting and transportation, to a situation in which timber must be grown as a crop with all the associated production costs This transition has increased the need for more efficient timber production However. the past three decades have also witnessed an enormous growth in the public's demand for noncommodity outputs from forests, ranging all the way from traditional forms of recreation to the more recent emphasis on protection of biodiversity And, superimposed on these changes has been the increasing importance of international economic linkages All of these changes have resulted in greater demand for forest economics and policy research

The first part of the book examines the historical, institutional, and investment context of forest economics and policy research Ellefson's chapter examines the research infrastructure in terms of numbers of scientists and projects, and explores the changes in level and allocation of investment in research over time and by agency The discussion of changes in funding levels, however, is somewhat difficult to follow because Ellefson never states explicitly whether the data reported in the tables are in constant or current dollars. A helpful strategy would have included the discussion of what agencies conduct forestry research and how such research is coordinated at the national level before launching into the details of the research infrastructure Instead, the reader is enlightened two chapters later, and the intervening chapter on research evaluation and planning seems totally out of context (It is interesting to note that Larry Tombaugh's call for competitive funding of forest economics and policy research is echoed in the National Research Council's recent report *Forestry Research A Mandate for Change* (National Academy Press, Washington, DC, 1990) )

The second part of the book consists of 20 chapters, each of which deals with a specific area within foiestry The chapter on institutional arrangements for directing the use and management of forests by Peirv Hagenstein should especially interest resource economists He calls attention to the long-term changes in the nature of property rights and the need for the research community to keep both public and private landowners abreast of the implications of such changes Forest economists have given only modest attention to evaluation of existing institutions and even less to anticipatory research on the development of new and imaginative institutional alternatives Yet. the future will likely be characterized by increased emphasis on management of forests as ecosystems, by greater recognition of the interrelationships between forest and agricultural lands, and by incorporation of principles of landscape management into resource conservation and development policies. The marginal value of research in this area would seem to be very high indeed

An institutional factor that has long irked foresters is the ad valorem property tax Objections to the property tax go back to 1819, when Governor Walcott of Connecticut pointed out that owners of forestland must pay the tax for many years but receive income only when they harvest trees In the early part of this century, F R Fairchild's theoretical analysis confirmed the bias of the property tax against capitalintensive, long-maturity enterprises like forestry. The argument has become so well entienched in the forestry community that virtually every State has an alternative to ad valorem taxation of forestlands Yet, as David Klemperer points out in his chapter on taxes and forestry, there has been almost no empirical research to determine the effectiveness of these alternative programs in promoting sound forestry practices, the administrative costs they impose on local and State governments, or the distribution of benefits

The situation is much the same for research on the income tax The nature of timber production is such that many costs must be paid well in advance of the

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receipt of income Revenue from timber sales can qualify for capital gains treatment, but the Tax Reform Act of 1986 removed the principal advantage of such treatment Advocates of capital gains for timber sale income noted that their arguments were damaged severely by the absence of any credible emprical research on the impact of the capital gains on forest management decisions Past research has typically been based on analytical models or simulation exercises But as Klemperer points out, if research is to have policy relevance, there is a strong need to document empirically the effects of income tax provisions on forest management decisions

The chapter on forecasting demand and supply of forest resources, products, and services focuses almost exclusively on timber It provides a good overview of recent equilibrium market models developed in the United States and a brief discussion of work in other countries and by international agencies This is one of the few instances in which forest economics and policy research outside the United States is recognized. The discussion of the market models is surprisingly frank For example, the author, Clark Row, readily admits that data deficiencies are frequently overcome through the use of "expert judgment" and that model validation is often ad hoc and judgmental, frequently being based largely upon the credibility of the projected scenarios Data are even more limiting at the subregional level Yet, as Henry Webster and Daniel Chappelle discuss in their chapter on community and regional economic growth and development, such data are ciucial for formulation of rational policies

The chapters include (1) "Development and Accomplishments of Research Programs" by Henry J Vaux and H R Josephson, (2) "Problem Orientation and Investments in Research Programs" by Paul V Ellefson, (3) "Impact Evaluation and Planning of Research Programs" by David N Bengston, (4) "Organizational Involvement and Management of Research Programs" by Larry W Tombaugh, (5) "Institutional Arrangements Directing Use and Management of Forests" by Perry R Hagenstein, (6) "Economic Structure and Performance of Forest-Based Industries" by Jay O'Laughlin, (7) "Development, Dissemination, and Adoption of New Technology" by Allen L Lundgren, (8) "Forecasting Demand and Supply of Forest Resources, Products, and Services" by Clark Row, (9) "Social and Economic Growth of Developing Nations" by Hans M Gregersen and Jan G Laarman, (10) "International Trade in Forest and Related Products" by Thomas R Waggener, (11) "Wood Fiber Production" by J Michael Vasievich, (12) "Timber Harvesting" by Frederick W Cubbage, (13) "Production and Valuation of Forest and Wildland Recreation" by George L Peterson and Thomas C

Readers with a careful eye and the patience to wade through the entire book will detect a number of interconnecting threads that could lead to some quite interesting research questions Foi example, Jay O'Laughlin notes in his chapter on industrial organization that changes in the ownership of firms can influence the structure and performance of the forest products industry But, might not changes in ownership also have implications for community stability, as well as for the pattern of forest-based regional economic development, and even for international trade flows? O'Laughlin does not raise these questions Yet they have rarely been addressed by past research, and answers to them would seem to be important in the formulation of economic development strategies and antitrust policies

The book has its shortcomings, including an annoving number of grammatical errors. The organization and coverage of topics are uneven. For example, four chapters deal directly with timber, that is, with production and harvesting of wood fiber, management and protection against fire, insects, and diseases, and marketing of forest products. However, they are not grouped together. Production and valuation of recreation and water are each accorded a chapter, but neither wildlife nor range is given separate treatment. A chapter is devoted to nonindustrial forests but none to other ownerships

The main audience for this book will be the community of forest economics and policy researchers, but I doubt that many will read it from cover to cover The most

Brown, (14) "Policy Development and Program Administration" by Paul V Ellefson and James R Lyons, (15) "Resource Assessment, Information Management, and Communications Technology" by Thomas E Hamilton, (16) "Forestry Sector Environmental Effects" by J E de Steiguer, (17) "Community and Regional Economic Growth and Development" by Henry H Webster and Daniel E Chappelle, (18) "Taxation of Forest Products and Forest Resources" by W David Klemperer, (19) "Distribution and Marketing of Forest Resource Products" by William G Luppold and Gilbert P Dempsey, (20) "Forest Resources Law and Legal Processes" by Benjamin V Dall, (21) "Management of Fire in Forested Environments" by Thomas J Mills, (22) "Management of Insects and Diseases in Forested Environments" by Lloyd C Irland, (23) "Structure and Performance of Nonindustrial Private Forests" by William B Kurtz, (24) "Production and Valuation of Water from Forested Watersheds" by K William Easter, (25) "Challenges and Agendas for Forest Resource Economics and Policy Research in the Coming Decade" by H Fred Kaiser, Richard L Porterfield, and Paul V Ellefson

useful approach for current researchers and for those outside this community would probably be to focus on selected chapters that cover topics of special interest

The book nevertheless serves as a useful fourth benchmark in the evolution of forest economics and policy research

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